

Brent O. Hatch (5715)  
[bhatch@hjdllaw.com](mailto:bhatch@hjdllaw.com)  
HATCH, JAMES, & DODGE, P.C.  
10 West Broadway, Suite 400  
Salt Lake City, Utah 84101  
Telephone: (801) 363-6363  
Facsimile: (801) 363-6666

James D. Herschlein (pro hac vice pending)  
[jherschlein@kayescholer.com](mailto:jherschlein@kayescholer.com)  
KAYE SCHOLER LLP  
425 Park Avenue  
New York, New York 10022  
Telephone: (212) 836-8000  
Facsimile: (212) 836-8689  
*Attorneys for Lutron Electronics Co., Inc.*

**IN THE UNITED STATES DISTRICT COURT**  
**DISTRICT OF UTAH, CENTRAL DIVISION**

<p>LUTRON ELECTRONICS CO., INC.,</p> <p style="text-align: center;">Plaintiff,</p> <p style="text-align: center;">v.</p> <p>CRESTRON ELECTRONICS, INC., a New Jersey corporation, FACE GROUP, INC. D/B/A LIFESTYLE ELECTRONICS, a Utah corporation, LAVA CORP., a Utah corporation, AUDIO VISION SYSTEMS, LLC, a Utah limited liability company,</p> <p style="text-align: center;">Defendants.</p>	<p style="text-align: center;"><b>COMPLAINT</b> <b>(Jury Trial Demanded)</b></p> <p>Case: 2:09-cv-707</p> <p>Judge Dee Benson</p>
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Plaintiff Lutron Electronics Co., Inc. ("Lutron"), by its undersigned counsel, alleges, on knowledge as to its own conduct and otherwise on information and belief, as follows:

**PRELIMINARY STATEMENT**

1. This is a case of unlawful and unabashed copying. Lutron seeks to recover damages, and to obtain injunctive relief, as a result of the willful misappropriation by Crestron Electronics, Inc. (“Crestron”), Face Group, Inc. d/b/a Lifestyle Electronics (“Lifestyle”), Lava Corp. (“Lava”), and Audio Vision Systems (“AVS”) (collectively “Defendants”) of the valuable intellectual property embodied in Lutron’s U.S. Patents 5,982,103 (the “103 Patent”), 5,905,442 (the “442 Patent”), and 5,949,200 (the “200 Patent”).

2. Lutron and Defendants compete in the sale of electrical and electronic devices, particularly lighting control devices.

3. Established in 1961, Lutron is the pioneer in the lighting control industry. Lutron’s success is the result of its long history of innovation, beginning with its founder’s successful commercialization of the solid-state dimmer switch used to dim lamps (a generic term for lights of many varieties). Lutron’s dimmer switch replaced bulky rheostats and autotransformers that were inefficient and unattractive. After nearly fifty years, Lutron remains a leading innovator and the world’s industry leader in controlling natural and artificial light. This history of innovation is the result of Lutron’s substantial investment in research and development.

4. Lutron manufactures more than 10,000 different products to address the lighting control requirements of essentially any residential or commercial project. These products are capable of adjusting the intensity of virtually every kind of lamp. And not only is Lutron the leading provider of solutions for controlling electrical lighting (with its patented lighting control devices), but Lutron also provides innovative solutions for controlling natural daylight (with its motorized shades and blinds).

5. Lutron's inventions at the heart of this litigation involve advanced lighting control devices and lighting control systems. In particular, the '103 and '442 patents provide the ability to control remotely – and wirelessly – a system of dimmer switches and the ability to determine remotely the status (on/dimmed/off) of the dimmer switches using radio frequency communications. The '200 patent provides additional advances to lighting controls which are more fully set forth below.

6. Crestron is not an innovator, but instead has recognized the breakthroughs of Lutron's inventions and decided to copy them. Crestron makes, uses, offers to sell, and/or sells products that incorporate and infringe the technologies protected by Lutron's '103, '442, and '200 patents.

7. Specifically, Crestron's products including, but not limited to, its infiNET(TM) products infringe the '103 and '442 patents. Further Crestron's products including, but not limited to, its iLux(TM) products infringe the '200 patent.

8. Defendants Lifestyle, Lava, and AVS each use, offer to sell, and/or sell the Crestron products that incorporate and infringe the technologies protected by Lutron's '103, '442, and '200 patents.

9. Lutron seeks to stop Defendants' unlawful infringement and recover damages caused by that infringement.

**PARTIES**

10. Lutron is a Pennsylvania corporation with its principal place of business in Coopersburg, Pennsylvania. Lutron conducts business and sells its products in this judicial district.

11. Crestron Electronics, Inc. is a New Jersey corporation with its headquarters in Rockleigh, New Jersey. Crestron conducts business and sells infringing products in this judicial district. Specifically, Crestron offers to sell or sells infringing products in this judicial district through the other Defendants as well as through its subsidiary corporations and entities.

12. Face Group, Inc. d/b/a Lifestyle Electronics is a Utah corporation located at 2078 Prospector Avenue, Park City, Utah 84060. Lifestyle conducts business and sells infringing products in this judicial district.

13. Lava Corp is a Utah corporation located at 450 West 910 South, Heber City, Utah 84032. Lava conducts business and sells infringing products in this judicial district.

14. Audio Vision Systems, LLC is a Utah limited liability company located at 874 West 200 North, Orem, Utah 84057. AVS conducts business and sells infringing products in this judicial district.

**JURISDICTION AND VENUE**

15. Lutron's claims for patent infringement arise under the patent laws of the United States, 35 U.S.C. §§ 101 *et seq.*

16. This Court has original subject matter jurisdiction over Lutron's claims for relief, pursuant to the laws of the United States, 28 U.S.C. §§ 1331 and 1338(a).

17. The Court has personal jurisdiction over Crestron because it conducts business in this judicial district. The Court has personal jurisdiction over Lifestyle, Lava, and AVS because they are incorporated or organized, maintain offices, and conduct business in this judicial district.

18. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391 and 1400.

### **THE PATENTS-IN-SUIT**

#### **A. U.S. Patent 5,982,103**

19. Lutron's U.S. Patent 5,982,103 is entitled "Compact Radio Frequency Transmitting and Receiving Antenna and Control Device Employing Same."

20. Donald R. Mosebrook, Richard C. Compton, and Joel S. Spira are the named inventors on the '103 patent.

21. The '103 patent issued on November 9, 1999, and expires on February 7, 2016.

22. The '103 patent has at all relevant times been owned by Lutron and is presently owned by Lutron as the sole and exclusive assignee and owner of all right, title and interest to the patent.

#### **B. U.S. Patent 5,905,442**

23. Lutron's U.S. Patent No. 5,905,442 is entitled "Method and Apparatus for Controlling and Determining the Status of Electrical Devices from Remote Locations."

24. Donald R. Mosebrook, David E. Houggy, Robert G. Palmer, Jr., Joel S. Spira, Donald F. Hausman, Jr., Robin C. Moseley, and David G. Luchaco are the named inventors on the '442 patent.

25. The '442 patent issued on May 18, 1999, and will expire on February 7, 2016.

26. The '442 patent has at all relevant times been owned by Lutron and is presently owned by Lutron as the sole and exclusive assignee and owner of all right, title and interest to the patent.

**C. U.S. Patent 5,949,200**

27. Lutron's U.S. Patent No. 5,949,200 is entitled "Wall mountable Control System With Virtually Unlimited Zone Capacity."

28. Jonathan H. Ference, Frederick J. Lind, III, and Robert Paul Stocker are the named inventors on the '200 patent.

29. The '200 patent issued on September 7, 1999, and will expire on July 20, 2016.

30. The '200 patent has at all relevant times been owned by Lutron and is presently owned by Lutron as the sole and exclusive assignee and owner of all right, title and interest to the patent.

**THE TECHNOLOGY-IN-SUIT**

**A. Retrofit Two-Way Wireless Lighting Control Systems - The '103 and '442 Patents**

31. Beginning no later than the 1970's, lighting control and home automation companies sought a solution that would make retrofittable whole-home lighting control systems feasible. The goal was to be able to install switches and dimmer switches throughout home or office space to provide separate, localized control of a lamp, while at the same time allowing them to be part of a unified system that would allow for remote control and other benefits, particularly the ability to determine remotely – via communication back from the switch or dimmer switch to the remote control – the status of each lamp.

32. With such a status feedback system, there would be no more wandering the house and garage or the office complex to check that all lamps were off; the homeowner, cleaning staff or security would be able to turn all lamps in a building, or on a particular floor, to full on or off (or to a desired intensity level) with a single remote control. Two-way communication between switches or dimmer switches and various remote control units would make this possible as it would allow (1) remote control of the switch or dimmer switch; and (2) reporting to the remote control of the status of the lamps throughout the building.

33. Installing such a lighting system in a home or building that is being newly constructed can be far easier than installing such a system in a home or building with completed construction. For example, in the case of new-home construction, if a home builder considers the installation of the lighting control system before the walls are fully constructed and closed, the home builder can easily run communication wires between all of the dimmers, switches and remote controls. Those communication wires would then become concealed behind the walls once the walls are fully constructed.

34. However, the problem was, and still is, that the vast majority of the market is not new-home construction, but existing homes and other buildings. In existing structures, installers of traditional wired systems have to cut into walls and make costly modifications to the structure of the building to run the new wires required for a unified lighting control system. That is not an acceptable solution. The advantage of "retrofit" wireless lighting controls is the ability to install them in either new or existing homes without cutting into walls, resulting in a minimum amount of disruption and, consequently, less cost.

35. Until Lutron invented its new wireless radio-frequency (“RF”) dimmer switch in the mid-1990’s, countless others had focused their efforts to develop a retrofitable solution employing power-line carrier (“PLC”) communication (*i.e.*, signals over the electrical wires) and/or wireless systems that could communicate in only one direction (*i.e.*, from the remote control to the switch or dimmer switch). The one-way wireless communication systems lacked the advantage of lamp status reporting. The PLC systems proved too unreliable. Thus, PLC systems and one-way systems failed to provide an acceptable solution.

36. Wireless communication held the potential to solve both the retrofit and status feedback problems, but numerous technical obstacles stood in the way.

37. Among the most problematic obstacles for wireless two-way RF communication was the unfriendly electromagnetic environment presented by the standard dimmer switch. This unfriendly environment resulted from squeezing two-way RF communication components, in addition to the dimmer circuitry, into the extremely tight space available in dimmer switches designed and required to fit in standard electrical wall boxes. Thus, the RF communication components are forced into extremely close proximity to the electromagnetically “noisy” dimmer circuits. Overcoming the electromagnetic interference was thought to be impossible to resolve. Additionally, given that most electrical wall boxes are made of metal, which blocks RF signals, achieving RF communication between the components of the RF light system was particularly difficult.

38. Another completely separate problem for whole-home lighting control systems to overcome was the fact that many older homes lack a neutral wire in every electrical wallbox. Such a neutral wire was a necessary element in order for PLC systems to obtain power to



transmit communication (or feedback) signals. Any installed electrical wall box typically allows access to at least two wires: a “hot” wire lead connected to the power source and a “dimmed or switched hot” wire lead connected directly to the lamp. Many existing structures do not provide a third wire that would allow a direct connection to neutral in the electrical wall box.

39. The lack of a neutral wire is not a problem for traditional, mechanical on/off switches. However, for dimmer switches that require a power supply for microprocessor-based circuits, as well as RF communication components, the lack of direct access to neutral at the electrical wall box is a serious problem because it limits the power available to the dimmer switch. For a PLC-based dimmer switch to allow two-way communication, a direct connection to neutral at the wall box is required to access sufficient power to transmit PLC signals. Thus, this power limitation problem renders PLC systems unsuitable for many retrofit applications.

40. Thus, the structural and technical obstacles for whole-home (or building) lighting controls having two-way communication functionality were substantial. Lutron’s goal when it began this risky research-and-development effort was a reliable dimming system using devices designed to fit in standard-sized wall boxes and capable of two-way communication without the use of any additional wires. Lutron’s engineers overcame universal doubt and numerous technical obstacles. In fact, Lutron was advised by experts that it could not be done. Lutron’s research-and-development efforts, by dozens of engineers, consumed many man-years.

41. Lutron’s invention in the mid-1990’s solved the above-mentioned problems by using two-way RF communication and a relatively low-power RF transmitter. Lutron’s revolutionary dimmer switch fits in a standard electrical wall box and includes the power circuitry to dim lamps directly. It receives commands transmitted wirelessly by a remote control

and can report back to the remote control the status of the lamp using wireless RF communication. Additionally, the dimmer switch is powered through the two standard leads most commonly available in wall boxes, without the need for a neutral wire.

42. Additionally, Lutron's invention included a wall-mounted remote control that allowed the remote operation of local dimmers and switches and indicated the status of the electrical loads attached to the local dimmers and switches.

43. Lutron patented this revolutionary technology and began selling its new RF dimmer switch in 1996 under the "RadioRA®" trademark. This revolutionary product was an immediate success and the award-winning RadioRA® dimmer is still selling well today. The Lutron RadioRA® dimmer switches include a two-way radio that enables the dimmer switches to receive wireless commands from at least one remote control and also allows the dimmer switches to transmit status information wirelessly to one or more remote controls.

44. Lutron incorporates its patented RF technology in numerous other products as well.

**B. Multi-Zone, Multi-Load Wall Box Dimming Solutions - The '200 Patent**

45. For most rooms, one light switch will do. But larger rooms such as a ballroom, a conference room or a courtroom often benefit from more sophisticated lighting control devices. Typically these spaces have numerous lights (and may have fans or window shades) that are controlled by separate dimmers or switches often "ganged" together (*i.e.*, installed along side one another sharing the same multi-gang electrical wallbox). The resulting conglomeration of independent dimmers or switches or other controls is unattractive, complicated and ineffective.

46. One of Lutron's early solutions to this problem was its GRAFIK EYE® 3000, a single panel of lighting controls operable to control multiple groups of lights (referred to as

“zones”). The GRAFIK EYE® 3000 could be installed in a multi-gang electrical wall box, thus replacing several separate dimmers or switches. The GRAFIK EYE® 3000 includes separate dimming circuitry for each zone that it controls and further includes several separate user controls (*e.g.*, pushbuttons, sliders, etc.). Each user control is capable of controlling only one zone. In addition to lighting, such zones can control, for example, window treatments, such as shades. Because the GRAFIK EYE® 3000 must be installed in a standard multi-gang electrical wall box, must house the dimming circuitry required for each zone it controls, and has only one user control per zone, the maximum number of zones that could be controlled by the GRAFIK EYE® 3000 is limited.

47. In the late 1980's and early 1990's Lutron developed and eventually patented the technology necessary to control a virtually unlimited number of lighting zones with a single wall-mounted control. Lutron then began marketing this technology under the product name GRAFIK EYE® 4100, which was able to control more zones than it had user controls.

48. Each user control consists of a set of raise and lower buttons which respectively raise and lower the power to the controlled zone, and a corresponding set of visual indicators comprising light emitting diodes (“LEDs”). With respect to lighting, for example, the raise and lower buttons control the intensity of the power going to the controlled lamp, thereby dimming or brightening the lamp, and the LEDs display the intensity of the controlled lamp. Unlike its predecessor, however, the GRAFIK EYE® 4100 does not house the dimming circuitry for each zone. Rather, the GRAFIK EYE® 4100 is wired to a remote dimming panel which contains the dimming circuitry for each zone.

49. Further, the GRAFIK EYE® 4100 can control more zones than its predecessor because each user control can control multiple zones of lights. Specifically, the GRAFIK EYE® 4100 has a button that allows the user to select between the different zones that are being controlled. For example, in the default position, the GRAFIK EYE® 4100 controls 8 zones (zones 1-8). However, by using the select button (located on the left hand side of the GRAFIK EYE® 4100), the user can cause the same 8 user controls to control at least an additional 8 zones (zones 9-16). A single GRAFIK EYE® 4100 can therefore be used to control a much greater number of zones without having a singularly dedicated user control for each zone.

#### **LUTRON'S LICENSING AND DEFENSE OF THE PATENTS-IN-SUIT**

50. Some competitors have recognized the value of Lutron's patents and have either not used the patented technology or licensed it from Lutron without the need for litigation.

51. For example, Lutron has granted a license under the '103 and '442 patents to Cooper Industries, Ltd.

52. With Lutron's success in opening the market for retrofit RF lighting control systems, some competitors have begun unlawfully to incorporate Lutron's patented technology into their products. In order to protect its substantial investments in research and development, it has been necessary for Lutron to defend against this unlawful use by its competitors.

53. After litigation with Vantage Controls, Inc., Vantage agreed to license and pay a royalty to Lutron under the '103 and '442, as one aspect of the settlement of *Vantage Controls, Inc. v. Lutron Electronics, Co., Inc.*, Case No. 2:03-CV-00488 in the United States District Court for the District of Utah, Central Division.

54. After litigation with Leviton Manufacturing Co., Inc., Leviton agreed to license and pay a royalty to Lutron under the '103 and '442, as one aspect of the settlement of *In the Matter of Certain Lighting Control Devices Including Dimmer Switches and/or Switches and Parts Thereof*, Investigation No. 337-TA-599 in the International Trade Commission and *Lutron Electronics, Co., Inc. v. Leviton Manufacturing Co., Inc.*, Case Nos. 9:07-CV-43, 9:07-CV-96 and 9:07-CV-97 in the United States District Court for the Eastern District of Texas, Lufkin Division.

55. After litigation with Control4 Corporation, Control4 agreed to license and pay a royalty to Lutron under the '103 and '442, as one aspect of the settlement of *Lutron Electronics Co., Inc. v. Control4 Corporation*, Case No. 2:06-CV-00401 in the United States District Court for the District of Utah, Central Division.

**FIRST CLAIM FOR RELIEF**  
(Defendants' Infringement of the '103 Patent)

56. Lutron hereby incorporates by reference the foregoing paragraphs 1-55.

57. Defendants have infringed and/or contributed to the infringement of the '103 patent by making, selling and/or offering for sale within the United States, products that fall within the scope of one or more of the claims of the '103 patent, by way of example only, at least their wireless dimmers, keypads, controllers and transceivers.

58. Defendants have actively induced and are still actively inducing infringement of the '103 patent by actively inducing others to use, offer for sale, or sell one or more of the patented devices of the '103 patent.

59. The misconduct of Defendants as set forth herein gives rise to a cause of action for infringement of the '103 patent pursuant to 35 U.S.C. §§ 271 and 281.

60. On information and belief, Defendants have infringed and are infringing the '103 patent in willful, reckless, and deliberate disregard of Lutron's patent rights.

61. Lutron has been damaged by Defendants' infringement and has suffered and will continue to suffer irreparable injury for which there is no adequate remedy at law.

62. Unless and until enjoined by this Court, Defendants will continue to infringe and/or induce others to infringe the '103 patent.

63. By reason of the foregoing, Lutron is entitled to injunctive and monetary relief against Defendants, pursuant to 35 U.S.C. §§ 283-285, as more fully set forth below.

**SECOND CLAIM FOR RELIEF**  
(Defendants' Infringement of the '442 Patent)

64. Lutron hereby incorporates by reference the foregoing paragraphs 1-63.

65. Defendants have infringed and/or contributed to the infringement of the '442 patent by making, selling and/or offering for sale within the United States, products that fall within the scope of one or more of the claims of the '442 patent, by way of example only, at least their wireless dimmers, keypads, controllers and transceivers.

66. Defendants have actively induced and are still actively inducing infringement of the '442 patent by actively inducing others to use, offer for sale, or sell one or more of the patented devices of the '442 patent.

67. The misconduct of Defendants as set forth herein gives rise to a cause of action for infringement of the '442 patent pursuant to 35 U.S.C. §§ 271 and 281.

68. On information and belief, Defendants have infringed and are infringing the '442 patent in willful, reckless, and deliberate disregard of Lutron's patent rights.

69. Lutron has been damaged by Defendants' infringement and has suffered and will continue to suffer irreparable injury for which there is no adequate remedy at law.

70. Unless and until enjoined by this Court, Defendants will continue to infringe and/or induce others to infringe the '442 patent.

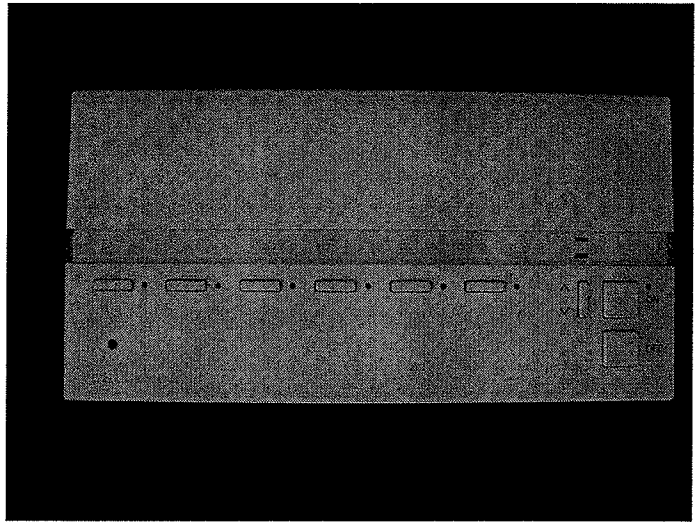
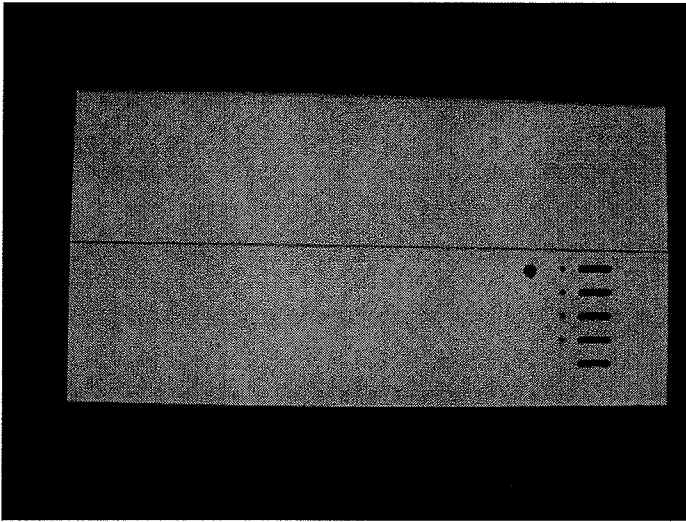
71. By reason of the foregoing, Lutron is entitled to injunctive and monetary relief against Defendants, pursuant to 35 U.S.C. §§ 283-285, as more fully set forth below.

**THIRD CLAIM FOR RELIEF**  
(Defendants' Infringement of the '200 Patent)

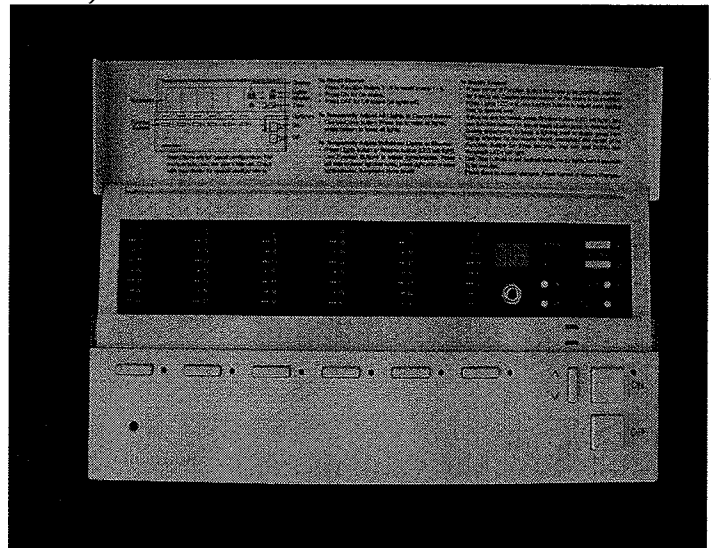
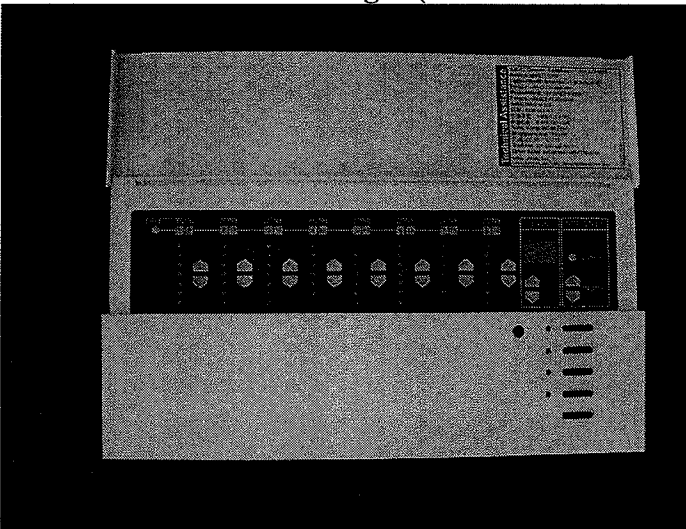
72. Lutron hereby incorporates by reference the foregoing paragraphs 1-71.

73. Defendants have infringed and/or contributed to the infringement of the '200 patent by making, selling and/or offering for sale within the United States, products that fall within the scope of one or more of the claims of the '200 patent.

74. Defendants' infringement of the '200 patent, and its copying of Lutron's innovative GRAFIK EYE product, evidences a willful, reckless, and deliberate disregard of Lutron's patent rights. An examination of Crestron's iLux product next to the Lutron product in Figure 1-3 below shows, among other indicia, that Defendants' infringement is deliberate and intentional:

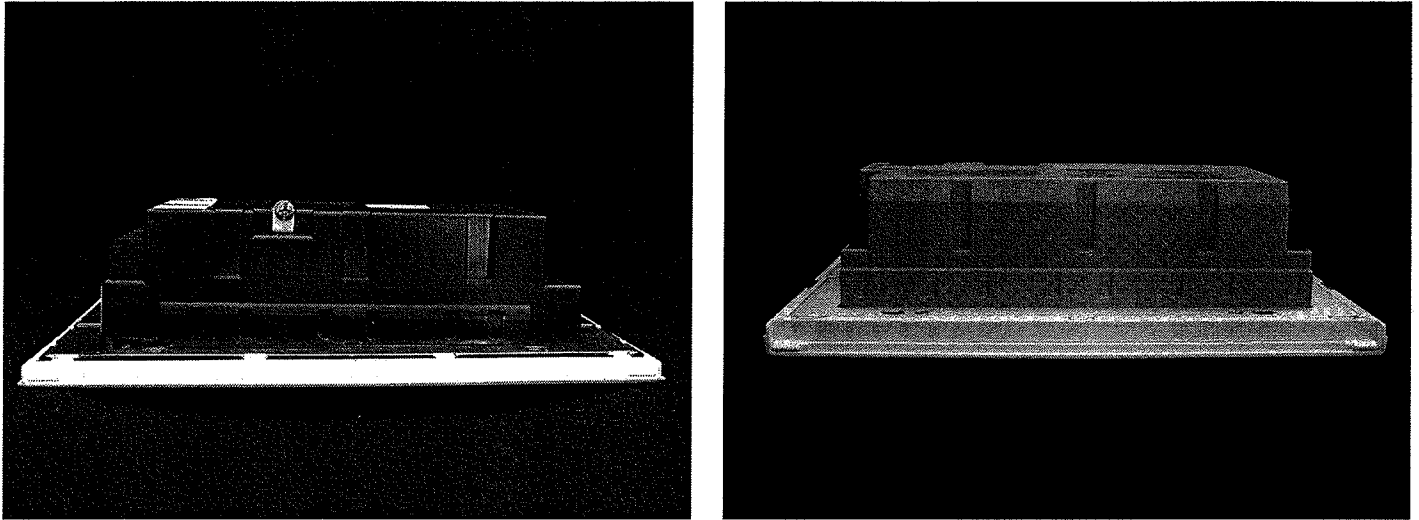


**Figure 1: Lutron's GRAFIK EYE 4116 on left and Crestron's iLux CLS-C6 on right (front view with door closed)**



**Figure 2: Lutron's GRAFIK EYE 4116 on left and Crestron's iLux CLS-C6 on right (front view with door open)**





**Figure 3: Lutron's GRAFIK EYE 4116 on left and Crestron's iLux CLS-C6 on right (rear view)**

75. Defendants have actively induced and are still actively inducing infringement of the '200 patent by actively inducing others to use, offer for sale, or sell one or more of the patented devices of the '200 patent.

76. The misconduct of Defendants as set forth herein gives rise to a cause of action for infringement of the '200 patent pursuant to 35 U.S.C. §§ 271 and 281.

77. On information and belief, Defendants have infringed and are infringing the '200 patent in willful, reckless, and deliberate disregard of Lutron's patent rights.

78. Lutron has been damaged by Defendants' infringement and has suffered and will continue to suffer irreparable injury for which there is no adequate remedy at law.

79. Unless and until enjoined by this Court, Defendants will continue to infringe and/or induce others to infringe the '200 patent.

80. By reason of the foregoing, Lutron is entitled to injunctive and monetary relief against Defendants, pursuant to 35 U.S.C. §§ 283-285, as more fully set forth below.

**JURY DEMAND**

Plaintiff demands a trial by jury on all matters alleged herein in accordance with the Seventh Amendment to the U.S. Constitution and Rule 38(b) of the Federal Rules of Civil Procedure.

**PRAYER FOR RELIEF**

WHEREFORE, Lutron demands judgment against Defendants:

- A. Holding that Defendants have infringed (by direct, inducement and/or contributory infringement) U.S. Patent Nos. 5,982,103, 5,905,442, and 5,949,200;
- B. Permanently enjoining Defendants and their agents, attorneys, servants, successor, assigns, employees and any and all parties acting in concert with any of them from directly or indirectly infringing in any manner any of the '103, '442, and/or '200 patents (whether by making, using, selling, offering to sell, or importing into the United States any product falling within the scope of any of the claims of the patents, or inducing others to engage in any of the aforementioned acts or otherwise);
- C. Directing Defendants to destroy their entire stock of infringing products in its possession within the United States;
- D. Awarding damages to Lutron to compensate it for the infringement of the '103, '442, and/or '200 patents under 35 U.S.C. § 284, in an amount to be determined at trial;
- E. Holding that Defendants' conduct was willful and awarding Lutron treble damages pursuant to 35 U.S.C. § 284;
- F. Awarding Lutron their reasonable attorneys fees and expenses against Defendants pursuant to 35 U.S.C. § 285;

G. Awarding Lutron pre- and post-judgment interest pursuant to 35 U.S.C. § 284 and 28 U.S.C. §1961;

H. Awarding Lutron other fees, costs, and/or expenses and such other relief as this Court may determine to be just and equitable.

Dated: August 10, 2009

Respectfully submitted,

By: /s/Brent O. Hatch  
HATCH, JAMES & DODGE  
Brent O. Hatch

KAYE SCHOLER LLP  
James D. Herschlein

*Attorneys for Lutron Electronics Co., Inc.*  
7200 Suter Road  
Coopersburg, PA 18036